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*Snow Surveyors Climbing to a Snow Course*

FEDERAL-STATE COOPERATIVE  
SNOW SURVEYS AND IRRIGATION WATER FORECASTS

for

**ARIZONA**

**FEBRUARY 15, 1946**

By

Division of Irrigation, Soil Conservation Service  
United States Department of Agriculture

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Data included in this report were obtained by the agency named above in cooperation with the Federal, State, and local organizations listed on the last page of this report.



# ARIZONA COOPERATIVE SNOW SURVEYS

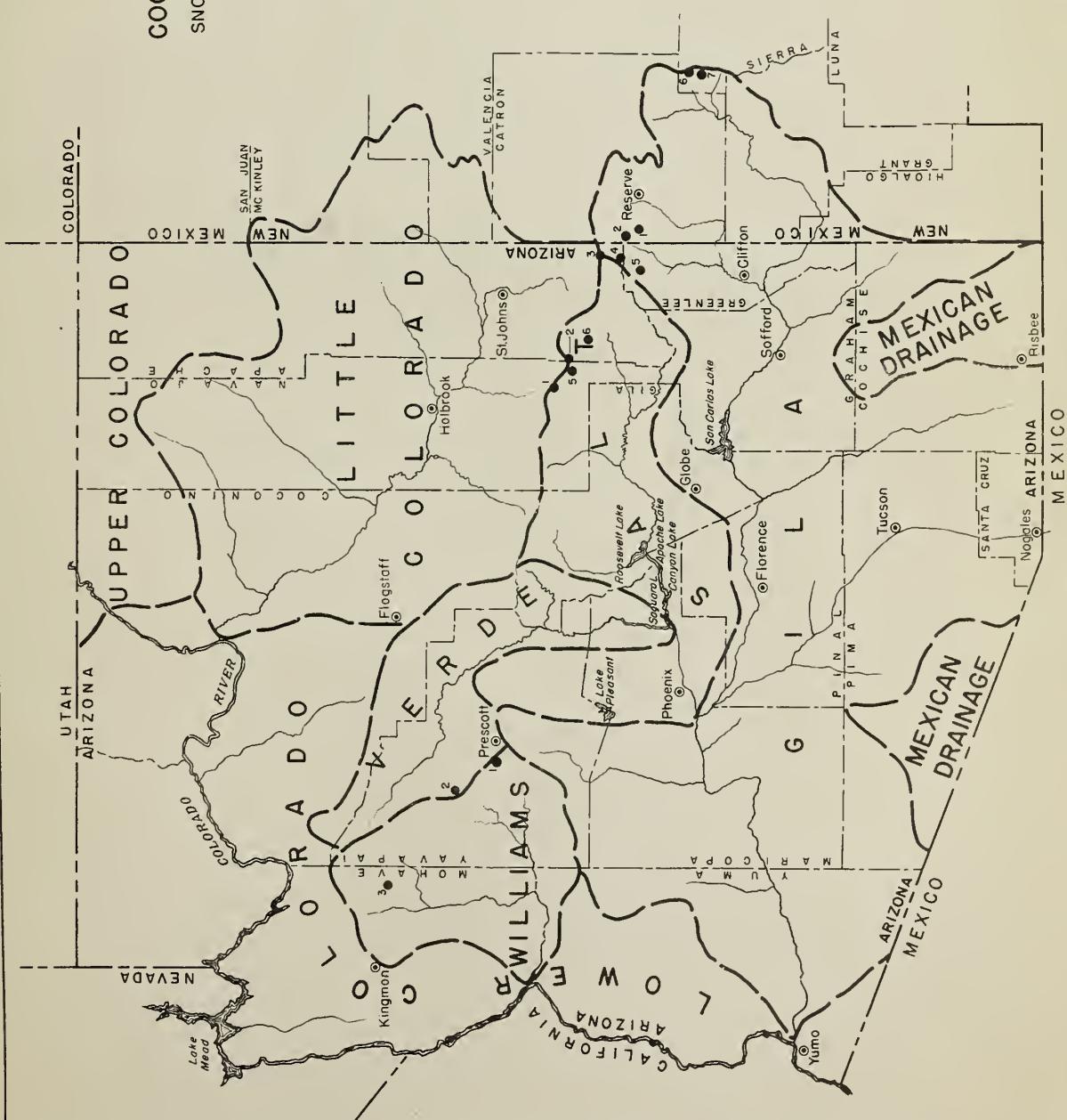
SNOW COURSES AND DRAINAGE BASINS

October 16, 1945

SCALE IN MILES  
32 0 32 64

## INDEX TO SNOW COURSES

Number	Name	Little Colorado River	Elevation
1.	Forest Dale	.....	6,000
2.	Le Mary	.....	7,200
3.	Naftosio	.....	8,200
	Williams River	.....	
1.	Iron Springs	.....	6,200
2.	Camp Wood	.....	5,100
3.	Willow Ranch	.....	5,000
	Gila River	.....	
1.	(Fin.) Frisco Divide	.....	8,000
2.	(Fin.) State Line	.....	6,000
3.	Naftosio	.....	6,500
4.	Coronado Trail	.....	6,000
5.	Deaver Fund	.....	6,000
6.	(Fin.) Taylor Creek	.....	7,050
7.	(Fin.) Jemeam	.....	7,100
	Verde River	.....	
1.	Iron Springs	.....	6,200
2.	Camp Wood	.....	5,700
	Salt River	.....	
1.	Forest Dale	.....	5,200
2.	Le Mary	.....	8,500
3.	Naftosio	.....	5,300
4.	Coronado Trail	.....	
5.	Deaver Ranch	.....	7,000
6.	Le Mary	.....	8,250





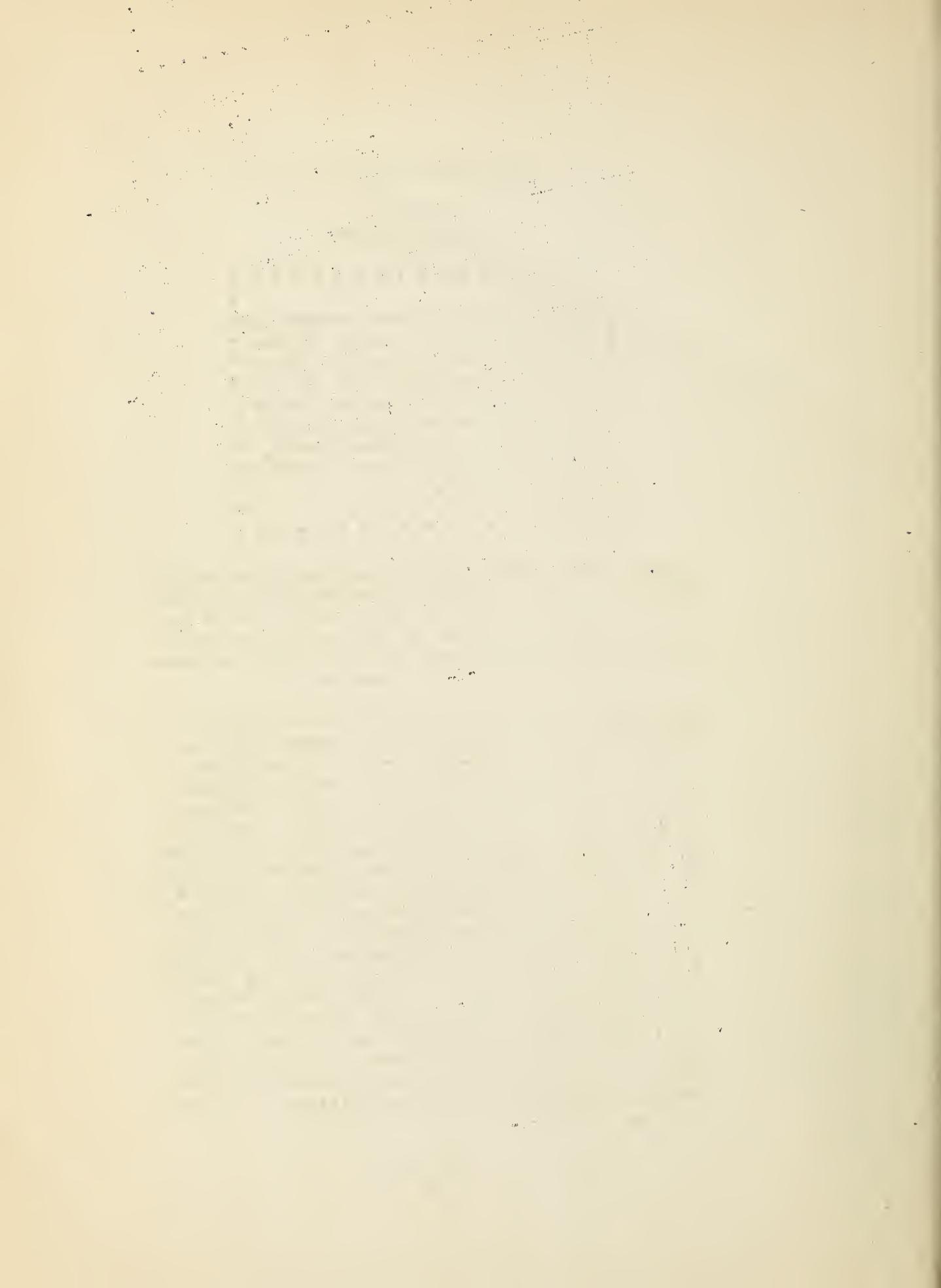
#### WATER SUPPLY OUTLOOK

Arizona  
February 15, 1946

\* February 15, 1946 snow surveys indicate that water content of snow on Little Colorado and Salt Rivers is about normal while the Gila is low. Precipitation since January 1 on the major watersheds ranges from normal to less than normal, while runoff and reservoir storage is below normal.

Precipitation Since January 1 precipitation on the higher elevations of Little Colorado, Gila and Salt River Watersheds was above normal while that in the valley was below normal. For the same period on Williams and Verde Watersheds, both valley and mountain precipitation was below normal.

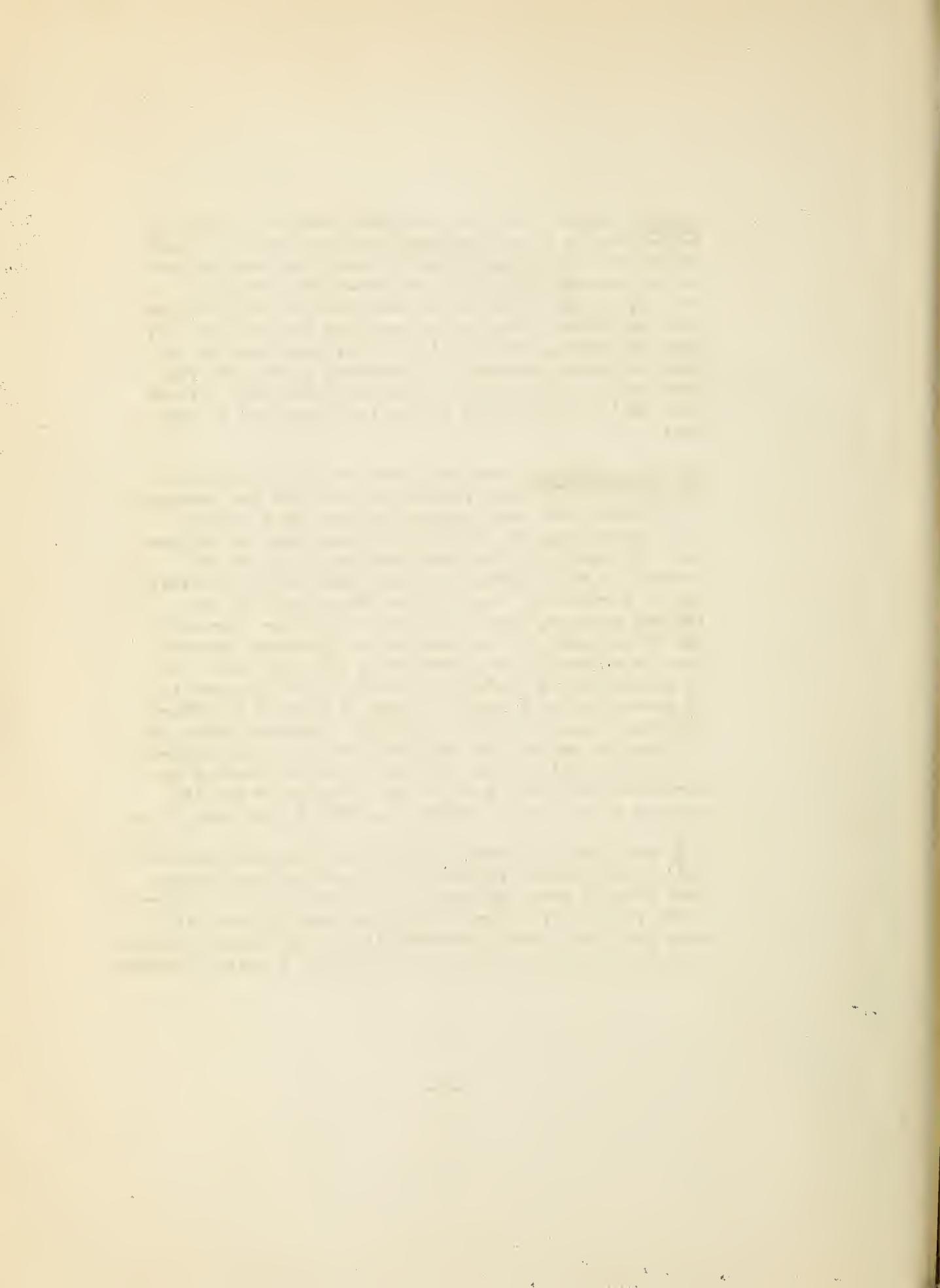
Snow Cover As of February 15, 1946 snow cover on the higher elevations of Little Colorado Watershed is above both the 1939-46 average and last year. Snow cover on Salt River is about average although greater than last year, while Gila River Watershed is still below average. The water content of snow on Fort Apache Indian Reservation (Salt River Watershed) is about 140 percent of the February 15 average and about 300 percent of the 1945 figure for the same date. Soil moisture conditions on the Reservation are good, while conditions in the Salt River Valley are fair. Water content of snow on Apache National Forest (Gila River Watershed) continues low, with the February 15, 1946 content about 50 percent of both the 1939-46 average and the 1945 figure on the same date. Soil moisture conditions on the upper reaches of the Gila are from fair to poor while the valley irrigated soils are dry. General snow cover and soil moisture conditions on the upper Williams are below normal.



Runoff Stream discharge over the state was generally below normal, during January, although there was some improvement over the October through December period. During January Gila River was about 95 percent of normal, Little Colorado and Salt Rivers about 93 percent and Verde River above Horseshoe Dam about 81 percent of normal. The Williams River continues to run somewhat below normal. The February 15 report from Fort Apache Indian Reservation indicates that streamflow on the Reservation is low for this time of the year.

Reservoir Storage Present water storage in most of the important Arizona reservoirs is below the February 15 average, with only slight increase over storage of a month ago. As of this date Lake Mead is 98 percent of storage on the same date last year and 92 percent of the 1939-45 average. Salt River Reservoirs are 81 percent of last year and 98 percent of the 1931-45 average, with San Carlos Reservoir storage 27 and 12 percent for the same dates. Bartlett Reservoir is extremely low, containing only 956 acre feet in comparison to 17,143 last year. Lake Pleasant is 47 percent of last year and only 11 percent of 1931-45 average. Lyman Reservoir on Little Colorado River is 161 percent of 1945 but only 45 percent of the 1941-45 average for this date. The new reservoir created by Horseshoe Dam above Bartlett on Verde River has increased storage over January 15, 1946 by 424 acre feet.

With Soil moisture conditions in the irrigated valleys and on the higher elevation of the watersheds ranging from fair to poor and snow water storage on the watersheds ranging from normal to below normal, there is need for above normal precipitation throughout the state to bring reservoir storage levels up to required amounts.



SNOW SURVEYS FEBRUARY 15, 1946

SNOW COVER MEASUREMENTS									
BASIN AND SNOW COURSE:		LOCATION		February 15, 1946:		Actual:		Past February 15 Water Depth :1946 as of :Years:Percent of :of Record:Average	
Name		Number:Sec.:Twp.:Rge.:Elev:		Snow : Water		Date : 1945		1944 : 1945 : Survey: (inches):(inches):	
LITTLE COLORADO RIVER:									
Forest Dale	1	2	9N :21E	6000:	9.0	2.5	2/15	0.1	0.7
McNary	2	14	8N :23E	7200:	11.0	3.1	2/15	0.7	2.9
Nutrioso	3	23	6N :30E	8500:	6.0	1.7	2/15	1.6	2.4
WILLIAMS RIVER									
Iron Springs	1	22	14N :16N	6200:	1.0	Trace	2/12	New	Course : 1
Camp Wood	2	3	16N :11W	5700:	0.3	Trace	2/15	"	" : 1
Willow Ranch	3	16	21N :11W	5000:	0	0	2/14	"	" : 1
GILA RIVER									
Frisco Divide	1	31	6S :6S	20W :21W	8000: 8500:	5.9 : 5.8	1.3 : 1.5	2/15 : 2/15	3.1 : 4.2
State Line	2	6	6S :6N	8000: 30E	8000: 8500:	6.0	1.7	2/15	1.6 : 1.6
Nutrioso	3	23	6N :5N	8500: 30E	8000: 8000:	5.7	1.6	2/15	0.7 : 0.7
Coronado Trail	4	26	4N :4N	8500: 30E	8000: 8000:	8.5	1.6	2/15	3.4 : 3.4
Beaver Head	5	13	10S :10S	10W :10W	8500: 8500:	3.0	2.3	2/15	1.2 : 4.6
Taylor Creek	6	20	11S :11S	10W :10W	8500: 7800:	3.0	1.1	2/15	0.3 : 0
Inman	7	6	11S :6	10W :10W	7800:	3.9	1.5	2/15	0.5 : New



SNOW SURVEYS FEBRUARY 15, 1946

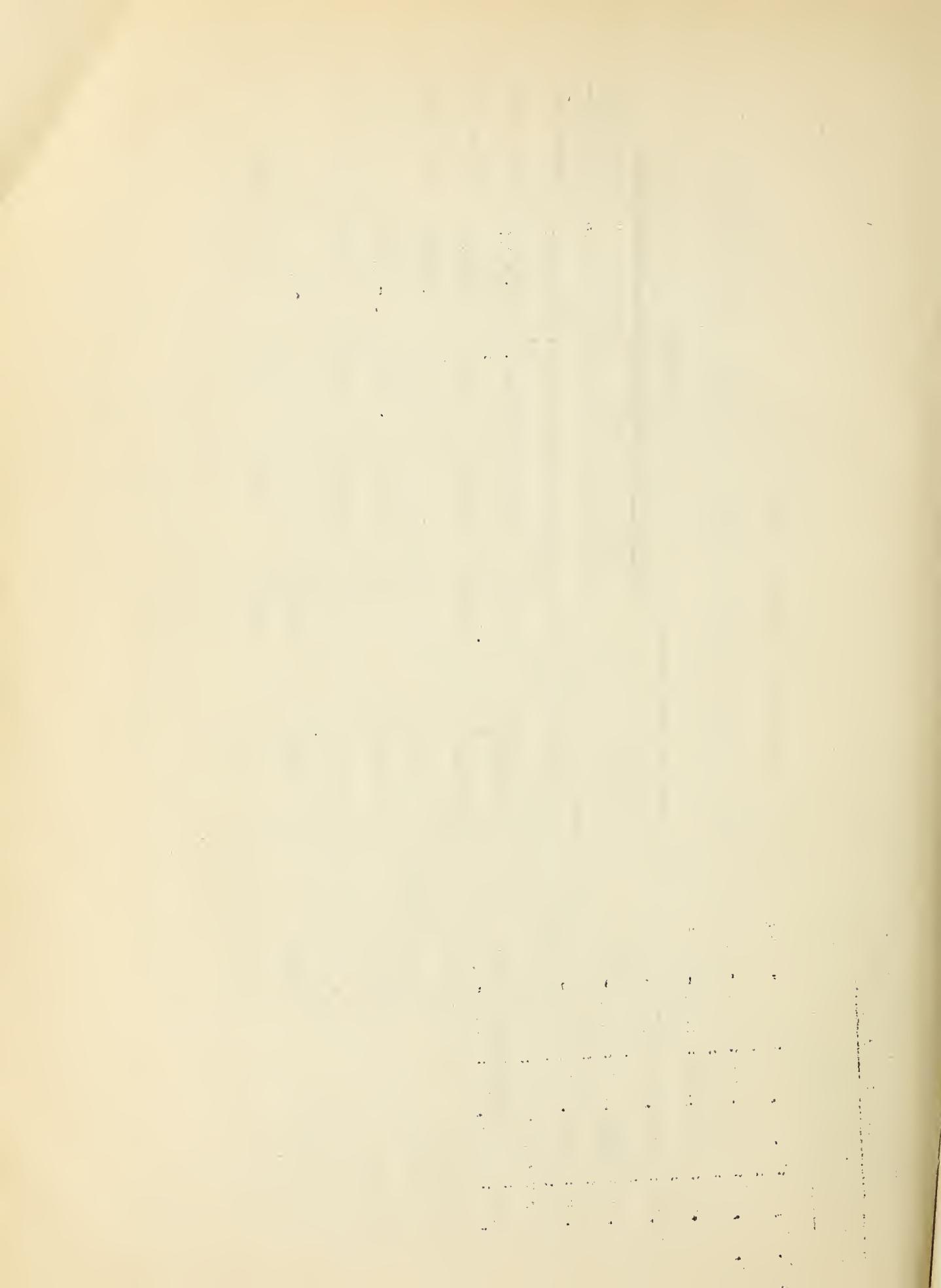
B. S. N. ID	SNOW COURSE:	LOCATION:	SNOW COVER MEASUREMENTS							
			Number:	Sec.:	Twp.:	Range:	Elev.:	February 15, 1946:	Actual:	Past
Name								Snow	Water	Date:
								Depth	of	1945
								(inches)	of	1944
								(inches)	of	Average
								(inches)	of	Record:
									inches)	Course:
VERDE RIVER										
Iron Springs	1	22	14N	3W	6200		1.0	Trace	2/12	New
Camp Wood	2	3	16N	6W	5700		0.3	Trace	2/15	"
SILT RIVER										
Forest Dale	1	2	9N	21E	6000		9.0	2.5	2/15	0.1
McNary	2	14	8N	23E	7200		11.0	5.1	2/15	2.1
Nutrioso	3	23	6N	30E	8500		6.0	1.7	2/15	1.6
Coronado Trail	4	26	5N	30E	8000		5.7	1.6	2/15	5.4
Milk Ranch	5	28	8N	23E	7000		6.2	1.6	2/15	0.2
McKey	6	15	7N	24E	8250		No	Report	New	Snow
										Course



STATUS OF RESERVOIR STORAGE AS OF FEBRUARY 15

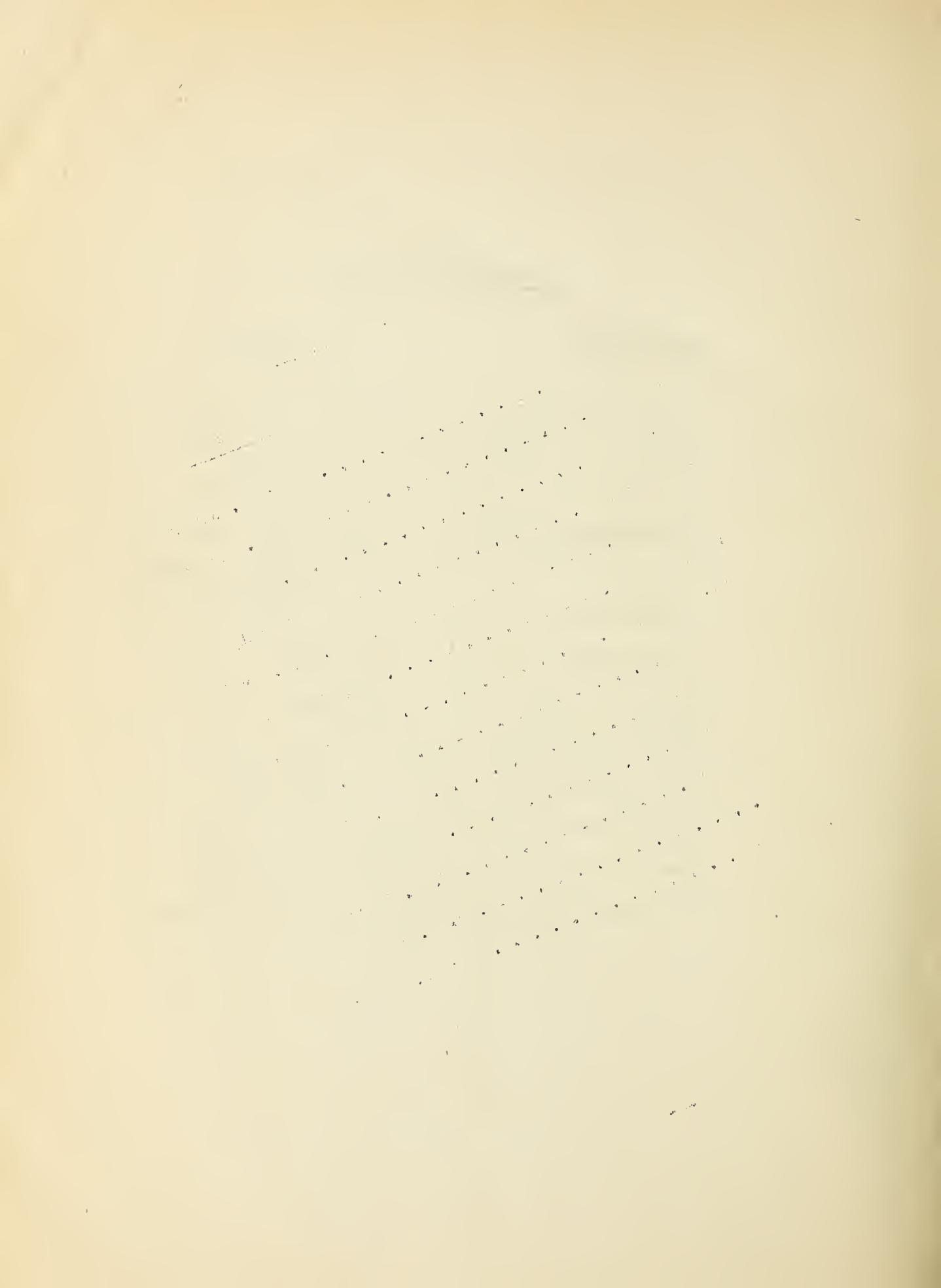
In the following tabulation water storage in important Arizona reservoirs as of about February 15, 1946 is compared with storage as of approximately the same date in 1945, 1944 and with the designated average.

Storage Reservoirs	Stream Basin	Capacity Acre-Feet	Acre - Feet in Storage about February 15			Years used for average
			1946	1945	1944	
Lake Mead	: Lower Colorado	: 31,142,000	: 21,768,000	: 22,293,000	: 23,460,000	: 1939 - 1945
	: Salt	: 1,770,000	: 724,523	: 890,581	: 1,022,060	: 1931 - 1945
	: Gila	: 1,200,000	: 28,388	: 105,000	: 281,000	: 1931 - 1945
	: Lower Colorado	: 688,000	: 604,600	: 570,904	: 565,340	: 1939 - 1945
Bartlett	: Verde	: 179,500	: 956	: 17,143	: 19,571	: 1941 - 1945
	: Agua Fria	: 178,500	: 3,534	: 7,472	: 2,754	: 1931 - 1945
Lake Pleasant						
Horseshoe	: Verde	: 60,000	: 10,020	: New Reservoir		
	: Little Colorado	: 28,500	: 3,660	: 2,280	: 3,250	: 1941 - 1945
Lyman						



LIST OF SNOW SURVEYORS

<u>SNOW COURSE</u>	<u>SURVEYOR</u>
Forest Dale . . . . .	Ward T. Kindred
McNary . . . . .	Ward T. Kindred
Nutrioso . . . . .	R. L. Diggs
Iron Springs . . . . .	Ernest Saxby
Camp Wood . . . . .	Mrs. C.C. Merritt
Willow Ranch . . . . .	Tiny Miller
Frisco Divide . . . . .	Dean M. Earl
State Line . . . . .	Dean M. Earl
Coronado Trail . . . . .	R. L. Diggs
Beaver Head . . . . .	Jes Burke
Taylor Creek . . . . .	F. M. Inman
Inman . . . . .	F. M. Inman
Milk Ranch . . . . .	Ward T. Kindred



The following organizations cooperate in the Arizona snow survey work:

STATE

Nevada Agricultural Experiment Station  
Reno, Nevada

FEDERAL

Department of Agriculture  
Forest Service  
    Apache Forest  
    Prescott Forest  
Soil Conservation Service  
    Division of Irrigation

Department of Commerce  
Weather Bureau  
    Arizona Section

Department of Interior  
Bureau of Reclamation  
    Region III  
Geological Survey  
    Arizona District  
Indian Service  
    Fort Apache Reservation

Gila Water Commission  
Safford, Arizona

IRRIGATION PROJECTS

Salt River Valley Water Users Association  
Phoenix, Arizona

San Carlos Irrigation and Drainage District  
Coolidge, Arizona

Other organizations and individuals furnish valuable information for the snow survey reports. Their cooperation is gratefully acknowledged.

